# **Amendments to the Claims:**

Filed: March 9, 2001

The listing of Claims will replace all prior versions and listings of the Claims in the application:

# **Listing of Claims**

1. (Currently Amended) A location information notifying method for notifying a predetermined computer of location information of a mobile communication terminal obtained on one of a plurality of mobile communication networks including a first mobile communication network and a second mobile communication network with differing representational formats for location information generated thereby, that which contains mobile communication terminals capable of wireless communication, said computer to which said location information is notified being a plurality of computers including a first computer capable of handling said location information in a first representational format and a second computer capable of handling said location information in a second representational format, said location information notifying method comprising:

a location information generating step of detecting the position of said mobile communication terminals and generating the location information thereof, wherein location information of a mobile communication terminal belonging to a first mobile communication network is generated in a third representational format, and location information of a mobile communication terminal belonging to a second mobile communication network is generated in a fourth representational format;

wherein said third or said fourth representational formats comprise one of:

- a format representing identification information provided to base stations of said respective mobile communication networks;
- a format representing identification information provided to wireless communication zones of a predetermined number of said base stations;
- a format representing identification information provided to partial areas of wireless zones of said base stations; and
- a format representing latitude and longitude;

Serial No. 09/786,818 Filed: March 9, 2001

a location information converting step wherein, in the event of notifying said location information of said mobile communication terminal belonging to said respective first or second mobile communication network to said first computer, said location information is converted from said respective third or fourth representational formatan original representational format into said first representational format, and in the event of making notification of location information of said mobile communication terminal belonging to said respective first or second mobile communication network to said second computer, said location information is converted from said respective third or fourth representational format into said second representational format; and

a location information notifying step of notifying said computers of said location information with the representational format thereof converted.

- 2. (Canceled)
- 3. (Original) A location information notifying method according to Claim 1, wherein said first and said second representational formats are one of:
  - a format representing latitude and longitude information; and
  - a format representing an administrative district.
  - 4. (Canceled)
- 5. (Currently Amended) A location information notifying method for notifying a predetermined computer of location information of a mobile communication terminal obtained on a mobile communication network which contains mobile communication terminals capable of wireless communication, said location information notifying method comprising:

obtaining a detected location of a mobile communication terminal;

generating location information indicative of the detected location of the mobile communication terminal;

determining a <u>level of precision of location information</u> needed by a computer that is in communication with the mobile communication terminal, wherein the computer is

Serial No. 09/786,818 Filed: March 9, 2001

configured to provide position related information to the mobile communication terminal based on location information that is at or above the determined level of precision;

converting the location information to the determined <u>level of precision</u>; and notifying to said computer said converted location information.

6. (Currently Amended) A location information notifying method according to Claim 5, wherein said location information with a <u>level of precision</u> needed by said computer includes one of:

location information representing latitude and longitude information; and location information representing an administrative district.

7. (Previously Presented) A location information notifying method for notifying a predetermined computer of location information of a mobile communication terminal obtained on a mobile communication network which contains mobile communication terminals capable of wireless communication, said location information notifying method comprising:

detecting the position of said mobile communication terminal and generating location information; and

notifying said computer of said generated location information by:

detecting a predetermined data sequence within data transmitted from said mobile communication terminal to said computer; and

substituting said location information for said predetermined data sequence to add said generated location information to data transmitted from said mobile communication terminal to said computer.

8. (Previously Presented) A location information notifying method according to Claim 7, wherein notifying said computer includes:

notifying to said mobile communication terminal the substitution of said location information for said predetermined data sequence prior to notifying said computer.

#### 9. (Cancelled)

10. (Previously Presented) A location information notifying method according to Claim 7, wherein said predetermined data sequence is contained within data transmitted from said computer to said mobile communication terminal;

Filed: March 9, 2001

and wherein notifying said computer includes detecting said data sequence in the process of said mobile communication terminal returning data transmitted from said computer, and substituting this with said location information.

11. (Previously Presented) A location information notifying method for notifying to a predetermined computer, location information of a mobile communication terminal obtained from a mobile communication network which contains mobile communication terminals capable of wireless communication, said location information notifying method comprising:

relaying communication between a mobile communication terminal and a computer, wherein said communication includes identification information of said mobile communication terminal;

receiving from said computer a request signal requesting location information of said mobile communication terminal;

detecting the location of said mobile communication terminal in response to said request signal based on said identification information, and generating location information of said mobile communication terminal;

detecting a predetermined data sequence within data transmitted from said mobile communication terminal to said computer; and

substituting said predetermined data sequence with said identification information.

- 12. (Cancelled)
- 13. (Cancelled)
- 14. (Previously Presented) A location information notifying method according to Claim 11, wherein said predetermined data sequence is contained within the data transmitted from said computer to said mobile communication terminal;

Filed: March 9, 2001

and wherein detecting said data sequence occurs in the process of said mobile communication terminal returning the data transmitted from said computer, and substituting this with said identification information.

15. (Original) A location information notifying method according to either Claim 7 or 11, further comprising:

a notification permission/non-permission determining step of determining whether or not said location information may be notified to said computer;

wherein said location information notifying step notifies said location information based on the determination result in said notification permission/non-permission determining step.

16. (Original) A location information notifying method according to Claim 15, wherein disclosure information regarding whether or not a computer is to have said location information disclosed thereto is stored in predetermined storing means beforehand;

and wherein said notification permission/non-permission determining step makes said determination by referring to said disclosure information stored by said storing means with regard to said computer which is to have said location information disclosed thereto.

17. (Original) A location information notifying method according to Claim 16, wherein said disclosure information is stored in said predetermined storing means beforehand for each mobile communication terminal;

and wherein said notification permission/non-permission determining step makes said determination by referring to said disclosure information stored by said storing means with regard to said computer which is to have said location information disclosed thereto.

18. (Original) A location information notifying method according to Claim 15, wherein said notification permission/non-permission determining step comprises:

a step of making an inquiry to said mobile communication terminal regarding whether or not said location information may be notified to said computer; and a step of making said determination based on response information from said mobile communication terminal to said inquiry.

19. (Original) A location information notifying method according to Claim 15, wherein terminal information, relating to whether or not said location information may be disclosed outside of said mobile communication network with regard to a mobile communication terminal, is stored in predetermined storage means beforehand;

and wherein said notification permission/non-permission determining step makes said determination by referring to terminal information stored in said storage means with regard to said mobile communication terminal relating to said location information of which notification is to be made.

- 20. (Original) A location information notifying method according to Claim 15, further comprising an error signal transmitting step of, in the event that it has been determined that transmission is not permissible in said notification permission/non-permission determination step, transmitting a transmission error signal to said mobile communication terminal or said computer to the effect that said location information may not be notified.
- 21. (Original) A location information notifying method according to either Claim 7 or 11, further comprising:

an input screen transmitting step of transmitting input screen data for inputting to said mobile communication terminal specified location information which the user of said mobile communication terminal can specify; and

a specified location information receiving step of receiving from said mobile communication terminal said specified location information input by said user;

wherein said location information notifying step notifies said computer of said specified location information received in said specified location information receiving step, along with said location information generated in said location information generating step.

22. (Previously Presented) A location information notifying method according to either Claim 7 or 11, wherein said mobile communication terminal comprises position measuring means for measuring its own position;

wherein said location information notifying method comprises receiving from said mobile communication terminal measured location information relating to the position of said mobile communication terminal measured by a position measuring means;

and notifying said computer of said measured location information, along with said location information.

- 23. (Previously Presented) A location information notifying method according to any of the Claims 1, 7, or 11, wherein said computer is an information providing server for providing said mobile communication terminal with position-related information relating to the position of said mobile communication terminal.
- 24. (Original) A location information notifying method according to any one of the Claims 1, 5, 7, and 11, wherein said mobile communication terminal is a cellular phone which performs wireless telephone communication.
- 25. (Currently Amended) A location information notifying apparatus for notifying a predetermined computer of location information of a mobile communication terminal obtained on one of a plurality of mobile communication networks, including a first mobile communication network and a second mobile communication network with differing representational formats for location information generated thereby, that which contains mobile communication terminals capable of wireless communication, said computer to which said location information is notified being a plurality of computers including a first computer capable of handling said location information in a first representational format and a second computer capable of handling said location information in a second representational format, said location information notifying apparatus comprising:
- a first location information generating unit configured to for detecting the position of said mobile communication terminal and generating the location information thereof,

wherein location information of a mobile communication terminal belonging to the first mobile communication network is generated in a third representational format, and location information of a mobile communication terminal belonging to the second mobile communication network is generated in a fourth representational format;

wherein said third or said fourth representational formats comprise one of:

- a format representing identification information provided to base stations of said respective mobile communication networks;
- a format representing identification information provided to wireless communication zones of a predetermined number of said base stations;
- a format representing identification information provided to partial areas of wireless zones of said base stations; and
  - a format representing latitude and longitude;

a location information representational format converting unit which, in the event of notifying said location information of said mobile communication terminal belonging to said respective first or second mobile communication network to said first computer, converts said location information from said respective third or fourth representational format representational format which is generated into said first representational format, and in the event of notifying said location information of said mobile communication terminal belonging to said respective first or second mobile communication network to said second computer, said location information is converted from said respective third or fourth representational generated representational format into said second representational format; and

a first location information notifying unit for notifying said computer of said location information with the representational format thereof converted.

# 26. (Canceled)

- 27. (Original) A location information notifying apparatus according to Claim 25, wherein said first and said second representational formats are one of:
  - a format representing latitude and longitude information; and
  - a format representing an administrative district.

Serial No. 09/786,818 Filed: March 9, 2001

# 28. (Canceled)

29. (Currently Amended) A location information notifying apparatus for notifying a predetermined computer of location information of a mobile communication terminal obtained on a mobile communication network which contains mobile communication terminals capable of wireless communication, said location information notifying apparatus comprising:

a location information generating unit for detection of the position of said mobile communication terminal and generation of location information at one of a plurality of different levels of with a precision needed by said computer,

wherein said location information generating unit is configured to determine a level of precision of said location information that is needed by said computer and,

wherein said location information generating unit is configured to generate said location information based on the determined level of precision so that said location information is generated at or above the determined level of precision; and

a position notifying unit for notification of said computer of said generated location information.

30. (Currently Amended) A location information notifying apparatus according to Claim 29, wherein said location information with a <u>level of precision</u> needed by said computer includes one of:

location information representing latitude and longitude information; and location information representing administrative district.

31. (Currently Amended) A location information notifying apparatus for notifying a predetermined computer of location information of a mobile communication terminal obtained on a mobile communication network which contains mobile communication terminals capable of wireless communication, said location information notifying apparatus comprising:

a location information generating unit for detection of the position of said mobile communication terminal and generation of location information based on information

included in communication received by said location information generating unit from said mobile communication terminal; and

a location information notifying unit configured to transmit data between said mobile communication terminal and said computer, wherein said generated location information is to be added to data relayed from said mobile communication terminal to said computer by said location information notifying unit and wherein said location information notifying unit comprises:

a detecting unit for detecting a predetermined data sequence within data transmitted from said mobile communication terminal to said computer; and a substituting unit for substituting said location information for said predetermined data sequence.

32. (Previously Presented) A location information notifying apparatus according to Claim 31, wherein said location information notifying unit comprises:

a receiving unit for receiving notification indicating the adding method of said generated location information added to said data from said computer; and

a transmitting unit for adding said generated location information to said data by said method and transmitting.

# 33. (Canceled)

34. (Currently Amended) A location information notifying apparatus according to Claim 33 31, wherein said predetermined data sequence is contained within data transmitted from said computer to said mobile communication terminal;

and wherein said location information notifying unit detects said data sequence in the process of said mobile communication terminal returning the data transmitted from said computer, and substitutes this with said location information.

35. (Previously Presented) A location information notifying apparatus according to Claim 31, further comprising:

a notification permission/non-permission determining unit for determining whether or not said location information may be notified to said computer;

wherein said location information notifying unit notifies said location information based on the determination result from said notification permission/non-permission determining unit.

36. (Original) A location information notifying apparatus according to Claim 35, comprising a disclosure information storing unit for storing therein disclosure information regarding whether or not said computer is to have said location information disclosed thereto;

wherein said notification permission/non-permission determining unit makes said determination by referring to said disclosure information stored by said disclosure information storing unit with regard to said computer which is to have said location information disclosed thereto.

37. (Original) A location information notifying apparatus according to Claim 36, wherein said disclosure information storing unit stores said disclosure information for each mobile communication terminal;

and wherein said notification permission/non-permission determining unit makes said determination by referring to said disclosure information stored by said disclosure information storing unit with regard to said computer which is to have said location information disclosed thereto.

38. (Original) A location information notifying apparatus according to Claim 35, wherein said notification permission/non-permission determining unit comprises:

an inquiry unit for making an inquiry to said mobile communication terminal regarding whether or not said location information may be notified to said computer; and

a determining unit for making said determination based on response information from said mobile communication terminal to said inquiry.

39. (Original) A location information notifying apparatus according to Claim 35, comprising a terminal information storing unit for storing terminal information relating to

whether or not said location information may be disclosed outside of said mobile communication network with regard to a mobile communication terminal;

wherein said notification permission/non-permission determining unit makes said determination by referring to said terminal information stored in terminal information storing unit, regarding said mobile communication terminal relating to said location information of which notification is to be made.

- 40. (Original) A location information notifying apparatus according to Claim 35, comprising an error signal transmitting unit for, in the event that it has been determined that transmission is not permissible by said notification permission/non-permission determining unit transmitting a transmission error signal to said mobile communication terminal or said computer to the effect that said location information may not be notified.
- 41. (Previously Presented) A location information notifying apparatus according to Claim 31, comprising:

an input screen transmitting unit for transmitting input screen data for inputting to said mobile communication terminal specified location information which the user of said mobile communication terminal can specify; and

a specified location information receiving unit for receiving from said mobile communication terminal said specified location information input by said user;

wherein said location information notifying unit notifies said computer of said specified location information received by said specified location information receiving unit, along with said location information generated by said location information generating unit.

42. (Original) A location information notifying apparatus according to Claim 31, wherein said mobile communication terminal comprises a position measuring unit for measuring its own position;

wherein said location information notifying apparatus comprises a measured location information receiving unit for receiving from said mobile communication terminal measured location information relating to the position of said mobile communication terminal measured by said position measuring unit;

Filed: March 9, 2001

and wherein said location information notifying unit notifies said computer of said measured location information received by said measured location information receiving unit, along with said location information generated by said location information generating unit.

43. (Currently Amended) A location information notifying apparatus for notifying a predetermined computer of location information of a mobile communication terminal obtained on a mobile communication network which contains mobile communication terminals capable of wireless communication, said location information notifying apparatus comprising:

a receiving unit configured to receive a request signal being relayed from said mobile communication terminal to said computer, wherein said request signal comprises identification information of said mobile communication terminal and a request for location information;

a location information generating unit configured to detect the position of said mobile communication terminal in response to said request signal, wherein said location information generating unit is configured to determine and generate location information as a function of said identification information; and

a location information notifying unit configured to include notification of said generated location information to said computer with said request signal, wherein said location information notifying unit comprises:

a detecting unit for detecting a predetermined data sequence within data
transmitted from said mobile communication terminal to said computer; and
a substituting unit for substituting said generated location information for said
predetermined data sequence.

44. (Previously Presented) A location information notifying apparatus according to Claim 43, further comprising:

an identification information adding unit for adding identification information of said mobile communication terminal to said data transmitted from said mobile communication terminal to said computer, and transmitting this to said computer;

wherein said location information generating unit determines the mobile communication terminal for which location information is to be generated and generates said location information, based on said identification information.

# 45. (Canceled)

46. (Currently Amended) A location information notifying apparatus according to Claim 45 43, wherein said predetermined data sequence is contained within the data transmitted from said computer to said mobile communication terminal;

and wherein said identification information adding unit detects said data sequence in the process of said mobile communication terminal returning data transmitted from said computer, and substitutes this with said information.

47. (Previously Presented) A location information notifying apparatus according to Claim 43, further comprising:

a notification permission/non-permission determining unit for determining whether or not said location information may be notified to said computer;

wherein said location information notifying unit transmits said location information based on the determination result from said notification permission/non-permission determining unit.

48. (Original) A location information notifying apparatus according to Claim 47, comprising a disclosure information storing unit for storing therein disclosure information regarding whether or not a computer is to have said location information disclosed thereto;

wherein said notification permission/non-permission determining unit makes said determination by referring to said disclosure information stored by said disclosure information storing unit with regard to said computer which is to have said location information disclosed thereto.

49. (Original) A location information notifying apparatus according to Claim 48, wherein said disclosure information storing unit stores said disclosure information for each mobile communication terminal;

Filed: March 9, 2001

and wherein said notification permission/non-permission determining unit makes said determination by referring to said disclosure information stored by said disclosure information storing unit with regard to said computer which is to have said location information disclosed thereto.

50. (Original) A location information notifying apparatus according to Claim 47, wherein said notification permission/non-permission determining unit comprises:

an inquiry unit for making inquiry to said mobile communication terminal regarding whether or not said location information may be notified to said computer; and

a determining unit for making said determination based on response information from said mobile communication terminal to said inquiry.

51. (Original) A location information notifying apparatus according to Claim 47, comprising a terminal information storing unit for storing terminal information relating to whether or not said location information may be disclosed outside of said mobile communication network with regard to a mobile communication terminal;

wherein said notification permission/non-permission determining unit makes said determination by referring to terminal information stored in said terminal information storing unit, regarding said mobile communication terminal relating to said location information of which notification is to be made.

52. (Original) A location information notifying apparatus according to Claim 47, comprising an error signal transmitting unit for transmitting, in the event that it has been determined that transmission us not permissible has been made by said permission/non-permission determining unit, a transmission error signal to said mobile communication terminal or said computer to the effect that said location information may not be notified.

53. (Previously Presented) A location information notifying apparatus according to Claim 43, comprising:

Filed: March 9, 2001

an input screen transmitting unit for transmitting to said mobile communication terminal input screen data for inputting specified location information which the user of said mobile communication terminal can specify; and

a specified location information receiving unit for receiving from said mobile communication terminal said specified location information input by said user;

wherein said location information notifying unit notifies said computer of said specified location information received by said specified location information receiving unit, along with said location information generated by said location information generating unit.

54. (Previously Presented) A location information notifying apparatus according to Claim 43, wherein said mobile communication terminal comprises a position measuring unit for measuring its own position;

wherein said location information notifying apparatus comprises a measured location information receiving unit for receiving from said mobile communication terminal measured location information relating to the position of said mobile communication terminal measured by said position measuring unit;

and wherein said location information notifying unit notifies said computer of said measured location information received by said measured location information receiving unit, along with said location information generated by said location information generating unit.

- 55. (Original) A location information notifying apparatus according to any one of the Claims 25, 29, 31, and 43, wherein said computer is an information providing server for providing said mobile communication terminal with position-related information relating to the position of said mobile communication terminal.
- 56. (Original) A location information notifying apparatus according to any one of the Claims 25, 29, 31, and 43, wherein said mobile communication terminal is a cellular phone which performs wireless telephone communication.

57.-59. (Canceled)

60. (Currently Amended) A method for notification of a location of a mobile
communication terminal, the method comprising:
determining a location of mobile communication terminal in a communication
network based on identification information of the mobile communication terminal received
over the communication network;
generating location information indicative of the determined location of the
mobile communication terminal, wherein the format of the location information that is
generated is selected from the group consisting of a format representing identification
information provided to base stations of said mobile communication network, a format
representing identification information provided to wireless communication zones of a
predetermined number of said base stations, a format representing identification information
provided to partial areas of wireless zones of said base stations and a format representing
latitude and longitude;
converting the location information to a format that is compatible with a
computer in communication with the mobile communication terminal, wherein the computer
is configured to provide position related information to the mobile communication terminal;
and
transmitting the converted location information over the communication
network for receipt by the computer.
61. (Currently Amended) A method for notification of a location of a mobile
communication terminal, the method comprising:
determining a location of mobile communication terminal in a communication
network based on identification information of the mobile communication terminal received
over the communication network;
generating location information indicative of the determined location of the
mobile communication terminal;

group consisting of a format representing identification information provided to base stations of said mobile communication network, a format representing identification information provided to wireless communication zones of a predetermined number of said base stations, a format representing identification information provided to partial areas of wireless zones of said base stations and a format representing latitude and longitude; and

Filed: March 9, 2001

the first computer also includes a location information providing unit, the location information providing unit configured to transmit the converted location information over a communication network for receipt and use by the second computer in communication with the mobile communication terminal.

68. (Currently Amended) A system for notification of a location of a mobile

communication terminal in a mobile communication network, the system comprising:

a first computer that includes a position measurement center configured to

determine a location of the mobile communication terminal operable within the

mobile communication network;

the position measurement center also configured to generate location

information indicative of the determined location of the mobile communication

terminal;

the first computer also includes a location information converting device, the

location information converting device configured to convert the location information

to a format that is compatible with a second computer in communication with the

mobile communication terminal; and

the first computer also includes a location information providing unit, the location information providing unit configured to transmit the converted location information over a communication network for receipt and use by the second computer in communication with the mobile communication terminal;

wherein the first computer also includes a data distribution managing unit configured to substitute converted location information for a predetermined data sequence, the predetermined data sequence included in data being relayed from the mobile communication terminal to the second computer.

69. (Currently Amended) The system <u>according to any</u> of claims <u>67 or 6863</u>, wherein the first computer is a gateway server and the second computer is an information provider server.

- 70. (New) A location information notifying method according to Claim 5, wherein converting the location information to the determined level of precision comprises converting only when the level of precision is lower than what is needed.
- 71. (New) The method according to any one of claims 60 or 61, wherein converting the location information comprises determining the level of precision of the location information needed by the computer, and converting the location information to the needed level of precision.
- 72. (New) The method according to any one of claims 60 or 61, wherein converting the location information comprises determining the format of the location information needed by the computer, and converting the location information to the needed format.
- 73. (New) The system according to any one of claims 67 or 68, wherein the first computer is configured to relay data communicated over the communication network between the mobile communication terminal and the second computer.
- 74. (New) The system according to any one of claims 67 or 68, wherein the location information converting device is configured to identify a predetermined format for the location information that is compatible with the second computer.
- 75. (New) The system according to any one of claims 67 or 68, wherein the location information converting device is configured to identify a level of precision of the location information based on a predetermined level of precision requirement of the second computer.

76. (New) A location information notification method for notifying a predetermined computer of location information of a mobile communication terminal, the method comprising:

providing a first mobile communication network and a second mobile communication network each configured to generate different formats of location information;

generating location information of a first mobile communication terminal in a first format based on a detected position of the first mobile communication terminal in the first mobile communication network;

generating location information of a second mobile communication terminal in a second format based on a detected position of the second mobile communication terminal in the second mobile communication network;

converting the location information in the first format or the location information in the second format to a format that is compatible with a computer in communication with the mobile communication terminal, wherein the computer is configured to provide position related information to the mobile communication terminal; and

transmitting the converted location information over the communication network for receipt by the computer.

- 77. (New) The method of claim 76, wherein each of the first and second formats are one of:
  - a format representing identification information provided to base stations of said respective first or second mobile communication networks,
  - a format representing identification information provided to wireless communication zones of a predetermined number of said base stations,
  - a format representing identification information provided to partial areas of wireless zones of said base stations, and
    - a format representing latitude and longitude.
- 78. (New) A system for notification of a position of mobile communication terminals within a first mobile communication network and a second mobile communication

network, wherein the first and second mobile communication networks are configured to generate different formats of location information, the system comprising:

Filed: March 9, 2001

a location information generating unit configured to generate location information of a first mobile communication terminal in a first format based on a detected position of the first mobile communication terminal within the first mobile communication network,

and the location information generating unit configured to generate location information of a second mobile communication terminal in a second format based on a detected position of the second mobile communication terminal within the second mobile communication network;

a location information representational format converting unit configured to convert the location information in the first format or the location information in the second format to a format that is compatible with a computer in communication with the respective first or second mobile communication terminal, wherein the computer is configured to provide location-related information to the respective first or second mobile communication terminal; and

a location information notifying unit configured to transmit the converted location information over the communication network for receipt by the computer.

- 79. (New) The system of claim 78, wherein each of the first and second formats are one of:
  - a format representing identification information provided to base stations of said respective first or second mobile communication networks,
  - a format representing identification information provided to wireless communication zones of a predetermined number of said base stations,
  - a format representing identification information provided to partial areas of wireless zones of said base stations, and
    - a format representing latitude and longitude.